

WHAT IS CLAIMED IS:

1. A wireless receiving method implemented in a wireless receiving apparatus having a single MCU (microprocessor control unit), after the single MCU sequentially received signals having different frequencies transmitted from a plurality of peripheral devices in a mode of multi-segment multi-task data processing and finished a process for identifying the received signals, the single MCU proceeds the process comprising the steps of:

(a) reading a predetermined processing procedure with respect to a first signal from a memory;

(b) performing a predetermined process with respect to the first signal based on the predetermined processing procedure;

(c) storing index of the last finished step in the memory, after at least one step of the predetermined processing procedure has been performed with respect to the first signal;

(d) reading the predetermined processing procedure with respect to a second signal from the memory;

(e) performing the predetermined process with respect to the second signal based on the predetermined processing procedure;

(f) storing index of the last finished step in the memory, after at least one step of the predetermined processing procedure has been performed with respect to the second signal;

(g) determining whether all of the predetermined processes have been performed about the signals based on the predetermined processing procedure with respect to the signals; and

(h) sending all of the processed signals to a computer for processing based on data contained in the signals, if a result of the determination in step (g) is positive, otherwise looping back to step (a).

2. The method of claim 1, further comprising the steps of:

(i) reading a signal conversion table stored in the memory, after the signal has been received;

(j) determining whether a type of the received signal has a corresponding
5 type of a signal recorded in the conversion table;

(k) determining whether a length of the received signal is correct based on data of a corresponding signal recorded in the conversion table, if a result of the determination in step (j) is positive; and

(l) decoding the signal based on a corresponding decoding procedure
10 recorded in the conversion table, if a result of the determination in step (k) is positive, and sequentially reading components of the decoded signal, and sending all of the processed signals to the computer so that a CPU (central processing unit) of the computer is capable of processing based on data contained in the signal.

15 3. The method of claim 2, further comprising the step of if the result of the determination in step (j) is negative discarding the signal so as to continue to receive signal.

4. The method of claim 2, further comprising the step of if the result of the determination in step (k) is negative discarding the signal so as to continue to
20 receive signal.

5. The method of claim 2, wherein the processing based on data contained in the signal comprises a first processing with respect to a wireless peripheral device corresponding to the signal.

6. The method of claim 2, wherein the processing based on data contained in
25 the signal comprises a second processing with respect to an instruction or data corresponding to the signal.

7. A wireless receiving apparatus comprising:

a signal receiving circuit for receiving signals having different frequencies from a plurality of peripheral devices and classifying the signals based on the frequencies;

5 a memory for storing data and a conversion table which is capable of recording types, processing procedures, and decoding procedures of the plurality of signals; and

10 a MCU (microprocessor control unit) electrically coupled to the signal receiving circuit, the memory, and a computer respectively so that the MCU is capable of receiving the signals from the peripheral devices, the received signals are sent to the MCU for identification, by utilizing a mode of multi-segment multi-task data processing the MCU is capable of reading the corresponding processing procedure and decoding procedure from the memory, performing a predetermined process with respect to a first signal based on the processing procedure, after at least one step has been performed with respect to the first
15 signal store index of the last finished step in the memory, performing a predetermined process with respect to a second signal based on the processing procedure, after at least one step has been performed with respect to the second signal store index of the last finished step in the memory, repeats until a set of steps have been performed with respect to the first and the second signals,
20 the MCU continues to perform steps immediately by following the indices of the previous set of steps which are stored in the memory for carrying out a next set of steps, repeats until all of the signals have been processed, and finally sends all of the processed signals to the computer for processing based on data contained in the signals.